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BASF CORPORATION
PATENT DEPARTMENT
26701 TELEGRAPH ROAD
SOUTHFIELD, MI 48034-2442

EXAMINER

PENG, KUO LIANG

| ART UNIT | PAPER NUMBER |
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1712

DATE MAILED: 12/26/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/747,716

Applicant(s)

RAMESH ET AL.

Examiner

Kuo-Liang Peng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/22/00 filing.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 27-31 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13, 18, 19 and 21-26 is/are allowed.
- 6) ☒ Claim(s) 10-12, 14-17 and 20 is/are rejected.
- 7) ☒ Claim(s) 15-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to a crosslinker, classified in class 525, subclass 474.
 - II. Claims 13-17, drawn to a coating composition, classified in class 106, subclass 287.11.
 - III. Claims 18-26, drawn to a method of preparing a cured coating using a crosslinker which is a reaction product of an amino resin, an olefinically unsaturated compound and a silicon-containing compound, classified in class 427, subclass 515.
 - IV. Claims 27-31, drawn to a method of preparing a cured coating using a component which is UV curable and thermally curable wherein the component is greater in the liquid to air interface than in the bulk liquid portion, classified in class 427, subclass 384+.
2. Inventions of Group I and Group II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a component in a molding composition and the inventions are deemed patentably distinct since there is nothing on this record to show them to be

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obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Inventions of Group I and Group III or Group IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Group I and Group III or Group IV have different function because Group I is directed to a crosslinker, while Group III or Group IV is directed to a method of preparing a cured coating.
4. Inventions of Group II and Group III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product can be cured by using an anionic and/or cationic initiator without involving any thermal process or UV process.
5. Inventions of Group II and Group IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of

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operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions of Group II and Group IV have different function because Group II is directed to a crosslinker, while Group IV is method of preparing a cured coating containing a component that does not need to be a crosslinker (i.e., the component can be UV and thermally cured by itself without interacting with the rest of components, and the rest of the components having at least one component having more than two functionalities and can be cured by themselves) as long as this component is distributed unevenly in the composition.

6. Inventions of Group III and Group IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions of Group III and Group IV have different function because Group III is directed to a method of preparing a cured coating composition comprising a crosslinker which is a reaction product of an amino resin, an olefinically unsaturated compound and a silicon-containing compound, while Group IV is method of preparing a cured coating containing a component that does not need to be a crosslinker (e.g., the component can be UV and thermally cured by itself without interacting with the rest of components, and the rest of the components having at least one component having more than two functionalities and can be cured by themselves) as long as this component is distributed unevenly in the composition.

7. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
8. During a telephone conversation with Mr. Mark Frentrup (Registration No. 41026) on December 12, 2001 a provisional election was made with traverse to prosecute the invention of Group II, claims 13-17. Affirmation of this election must be made by applicant in replying to this Office Action. Claims 1-12 and 18-31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).
10. Examiner has reconsidered the restriction requirement regarding the instant application and has decided to give an action on the merits for Claims 10-26.

Specification

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR 1.71(a)-(c):

- (a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.
- (b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.
- (c) In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be necessary to a complete understanding or description of it.

The specification is objected to under 37 CFR 1.71 because of the following reason(s):

It is not clear as to what the term “crosslinking composition” in page 15, line 16 refers to, i.e., the composition consists of crosslinkers, the coating composition as a whole, etc.

Claim Objections

12. Claims 15-17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 14 is directed to a coating composition. However, Claims 15-17 is directed to “a crosslinking composition according to Claim 14”.

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 10-12, 14-17 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10-12 recite the limitation "melamine core" in lines 6-7 of Claim 10 and line 2 of Claims 11 and 12. There is insufficient antecedent basis for this limitation in the claim.

Claims 14-16 recite the limitation "crosslinking composition" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "melamine formaldehyde resin" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Should "Claim 18" be -- Claim 19 -- ?

15. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

16. Claims 14-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In lines 6-7 of Claim 14 and line 3 of Claims 15-16, the term "crosslinking composition" causes confusion because it is not clear as to what this term refers to.

17. Claim 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

18. Claims 11-12, 14-17 and 20 would be allowable if rewritten to overcome the rejection(s) under claim objection and/or 35 U.S.C. 112, second paragraph and/or first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

19. Claim 13, 18-19 and 21-26 is allowed.

20. The following is an examiner's statement of reasons for allowance:

The instant invention is allowable over the closest reference: Ryntz (US 4,766,185)

Ryntz discloses a compound obtained by reacting a hydroxy functional polysiloxane graft copolymer (col. 1, lines 65-68) with an amino resin (col. 11, line 6) such as an aminoplast (e.g., a melamine-formaldehyde resin)(col. 2, line 62 and col. 12, lines 42-43). The hydroxy functional

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polysiloxane graft copolymer can be prepared as follows: A hydroxy functional polysiloxane (col. 2, lines 28-30) with an isocyanato monomer having olefinically unsaturation (col. 2, lines 17-28) to form a polysiloxane macromonomer having both hydroxyl groups and olefinic unsaturation (col. 2, lines 7-10), which can be further grafted with a monomer to afford the hydroxy group containing polysiloxane graft copolymer (col. 1, lines 65-67 and col. 2, lines 10-16). The monomer for the graft polymerization can be an (meth)acrylate containing a hydroxy group (col. 4, lines 30-46) because the hydroxy group is also reactive toward the amino resin). As such, the hydroxy group containing polysiloxane contains hydroxy groups on both the polysiloxane backbone and the poly(meth)acrylate grafts. However, Ryntz does not teach or suggest the presence of residual alkylol groups in the melamine-formaldehyde resin nor suggest or teach the use of the compound along with an organic resin having functional groups reactive toward alkoxyalkyl or alkylol groups.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (703) 306-5550. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson, can be reached on (703) 308-2340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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Kuo-Liang Peng

December 13, 2001

A handwritten signature in black ink, appearing to read "Robert A. Dawson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Robert Dawson
Supervisory Patent Examiner
Technology Center 1700